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The Apionid Subfamiliy Nanophyinae from the Nepal Himalayas, with Description of a New Species*) (Coleoptera: Curculionidae)

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With 13 figures

Summary

Nanophyes proles Heller 1915 and *N. vulgaris* Pajni & Bhateja 1982 are recorded from Nepal for the first time. Their systematic position and distribution are discussed. *N. sanisharensis* **n. sp.** is described.

Zusammenfassung

Nanophyes proles Heller 1915 und *N. vulgaris* Pajni & Bhateja 1982 werden zum ersten Mal aus Nepal nachgewiesen, ihre systematische Stellung und ihre Verbreitung werden diskutiert. *N. sanisharensis* **n. sp.** wird beschrieben.

1. Introduction

The subfamily Nanophyinae is a compact natural group of apionid weevils distributed widely in the Eastern hemisphere and in North America but especially abundant in the Oriental and Afrotropical regions. Though the Asiatic fauna is rich and diverse no Nanophyinae have been recorded from Nepal till now. Three species from a single Nepalese locality are represented in the materials kindly submitted to me for examination by Prof. Dr. Jochen Martens and Dr. Wolfgang Schawaller. The small number of species is almost certainly a result of collecting methods: all Nanophyinae live on plants (and Oriental species mostly on trees) while ground and litter dwellers constitute the bulk of the collection.

*) Results of the Himalaya Expeditions of J. Martens, no. 183. – For no. 182 see: Stuttgarter Beitr. Naturk. (A) 485, 1992. – J. M. sponsored by Deutscher Akademischer Austauschdienst and Deutsche Forschungsgemeinschaft.

The collection has been deposited mainly in the Staatliches Museum für Naturkunde, Stuttgart (*SMNS*), partly in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (*ZISP*).

I am greatly indebted to Prof. Dr. J. Martens (Mainz) for the loan of the materials; Dr. W. Schawaller (Stuttgart) for the loan of literature and reading and checking the manuscript; and Dr. B. A. Korotyaev (St. Petersburg) for the possibility to examine the type specimen of *Nanophyes proles* received from the Staatliches Museum für Tierkunde Dresden for a short time.

2. The genus *Nanophyes* Schoenherr 1838

All specimens available belong to this genus. Recently Alonso Zarazaga (1989, 1990) has established a number of genera for some Palaearctic and Oriental species placed earlier into *Nanophyes*. His analysis of species relations and grouping seems to be well-grounded; however, only a small part of described species has been taken into consideration. I agree with him about the generic status of *Psix* Alonso Zarazaga 1989, *Nanodiscus* Kiesenwetter 1864, and *Ctenomeropsis* Voss 1939, but *Meregallia* Alonso Zarazaga 1990 is rather a subgenus of *Psix* while *Pericartiellus* Alonso Zarazaga 1989, *Dieckmanniellus* Alonso Zarazaga 1989, *Nanomimus* Alonso Zarazaga 1989, and *Microon* Alonso Zarazaga 1989 should be treated as subgenera or even species-groups within the genus *Nanophyes* Schoenher 1838. Their rank cannot be estimated accurately before a general revision of other Oriental and Afrotropical taxa – so further multiplication of the genus-group names at that time is unwarranted in my view.

2.1. *Nanophyes proles* Heller 1915

1915 *Nanophyes proles* Heller, Philipp. J. Sci., D 10: 25, fig. 4.
1982 *Nanophyes plumbeus:* Pajni & Bhateja, Orient. Insects, 16: 459, figs. 35, 36, 71, 72 (non Motschulsky 1866) (misidentification).

Material: Ilam Distr., 5 km N Sanishare, feet of Siwalik Mts, 270–300 m, mixed *Shorea* forest, 3.–5. IV. 1988, leg. Martens & Schawaller, 5 ♂♂, 5 ♀♀ (SMNS, ZISP).

New for Nepal.

Originally described from Luzon Island, Philippines (Heller 1915) and recorded later from Java (Voss 1940), China: Fujian Province (Voss 1958), the Ryukyus (Morimoto 1964), and, as *N. plumbeus*, from India (Chandigarh, West Bengal, Goa, Assam, Manipur, Arunachal Pradesh, Nagaland, and Kerala) and Burma (Pajni & Bhateja 1982). I have seen also numerous specimens from Vietnam, Laos, Thailand, and China (Yunnan and Guanzhou Provinces). Pic (1933) described very insufficiently *N. bicoloripes* from Vietnam, probably it is identical with this species but type re-examination is necessary to confirm this possible synonymy. *N. proles* seems to be the most common species of *Nanophyes* throughout South and Southeastern Asia.

Though Pajni & Bhateja (1982) used my information about the type specimen of *N. plumbeus*, they have misinterpreted this name: the true *N. plumbeus* Motschulsky 1866 is a small species (1.8 mm long) without evident femoral denticulation, with only two small graines on the lower surface of front femur. The figures of the male genitalia in their paper demonstrate clearly that the common Indian species examined by them was *N. proles*. I have seen Heller's type of the latter, and it is identical with other specimens both in all sufficient external features and in very characteristic penis shape with widened and spoon-like arcuated apex.

N. proles is undoubtedly a true *Nanophyes*, as the genus is treated here, having 5-segmented antennal funicle, moderately narrow frons (which is narrower in female than in male), last elytral stria interrupted medially, first abdominal suture obliterated, without lateral pits, and apex of tegmen slightly emarginate. 8th elytral interval is not crenulate, front femora not incrassate in both sexes, first tarsal joint long, and specialized erect setae present on pronotum, tibiae, and odd elytral intervals, indicating a close affinity with *Nanophyes* s. str. and *Nanomimus* of Alonso Zarazaga (1989); the male pygidium is simple and the 4th abdominal suture functional as in *Nanomimus*. However, the tegmen shape is different, with the plate-base projecting medially but not bifid, more like the *Pericartiellus* type.

2.2. *Nanophyes vulgaris* Pajni & Bhateja 1982

1982 *Nanophyes vulgaris* Pajni & Bhateja, Orient. Insects, 16: 462, figs. 9, 37, 38, 73, 74.

Material: Ilam Distr., 5 km N Sanishare, feet of Siwalik Mts, 270–300 m, mixed *Shorea* forest, 3.–5. IV. 1988, leg. Martens & Schawaller, 6 ♀♀ (SMNS, ZISP). – Kathmandu Valley, Nagarjung, Jamacok, 1400–1600 m, secondary forest, 18. VIII. 1983, leg. Martens & Schawaller, 1 ♀ (SMNS).

New for Nepal; originally described from Northern India (Assam, Haryana, Uttar Pradesh, and West Bengal).

N. vulgaris is also a member of *Nanophyes* showing all generic features mentioned above for *N. proles*; it resembles superficially small Palaearctic *Nanophyes* s. str. (such as *N. brevis* Bohemann) except the armoured femora. 8th elytral interval not crenulate, front femora not incrassate, first tarsal joint long, specialized setae, though being relatively short, present on pronotum, tibiae, and odd elytral intervals. Unfortunately, the male abdominal structures could not be studied because of the absence of males in the material. According to figures in Pajni & Bhateja (1982) the plate-base of the tegmen is widely rounded resembling *Microon* species of Alonso Zarazaga (1989) in spite of external differences.

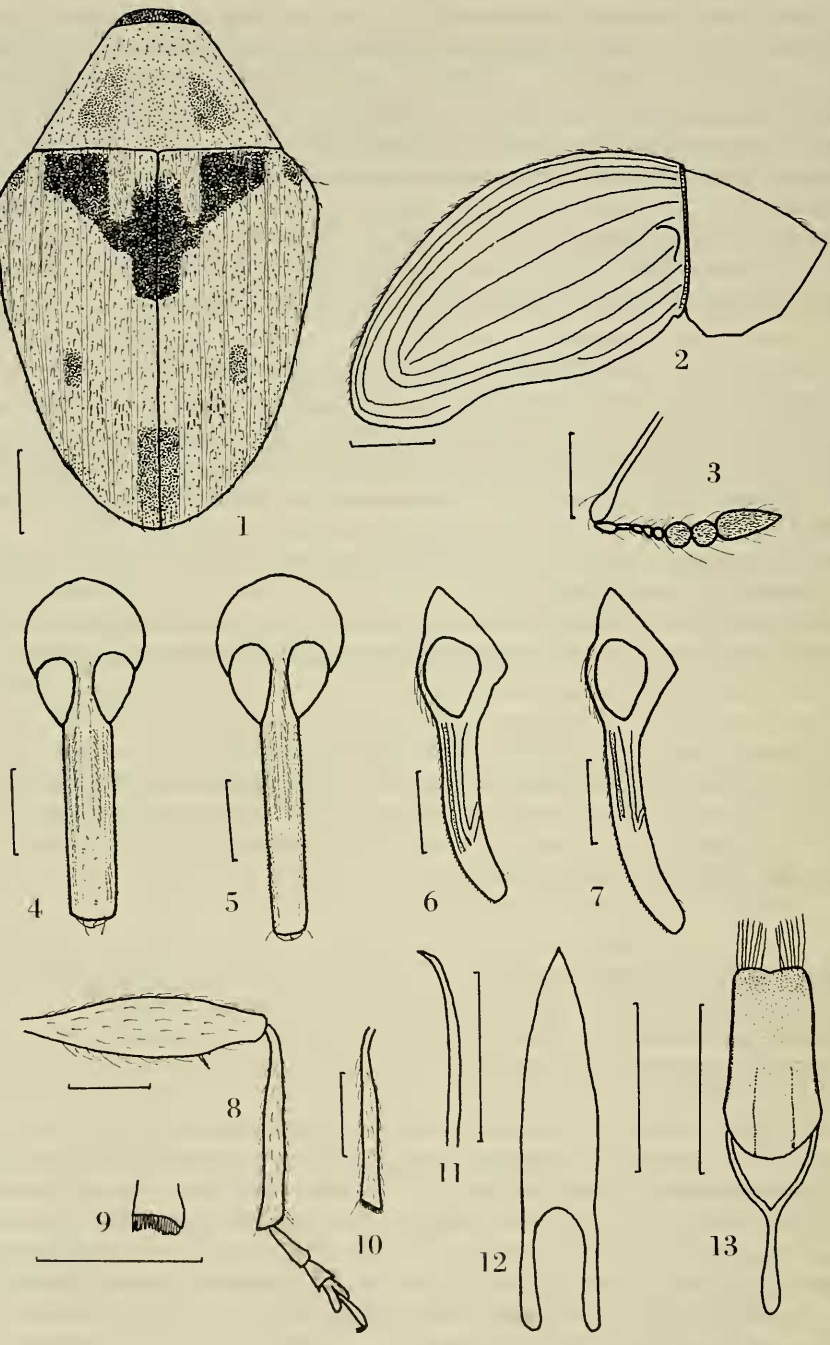
2.3. *Nanophyes sanisharensis* n. sp. (figs. 1–13)

Holotype (♂): Nepal, Ilam Distr., 5 km N Sanishare, feet of Siwalik Mts, 270–300 m, mixed *Shorea* forest, 3.–5. IV. 1988, leg. Martens & Schawaller (SMNS).

Paratypes: Same data as holotype, 1 ♂ (ZISP), 2 ♀♀ (SMNS). – Ilam Distr., between Ilam and Parbate, 1250–1450 m, cultivated land with bushes, 23. VIII. 1983, leg. Martens & Daams, 1 ♀ (SMNS).

♂♀. Yellow, with head, rostrum, antennae, meso- and metathorax, and tarsi darker, more or less brown, red-brown or black-brown. Pronotum with two light brown indefinite discal spots. Elytra with V-shaped basal spot, humeral tubercles and lateral intervals dark red- or black-brown; small postmedial spot at 4th interval and apical part of suture also more or less red-brown but usually less dark. Basal spot reaches laterally 5th interval; basal parts of first two intervals with yellow stripes, longer at the latter. Pubescence white except dark setae on basal elytral spot and between sutural apical stripe and discal spots.

Rostrum as long as head and prothorax together (♀) or somewhat shorter (♂), distinctly arcuated subapically in both sexes, in ♂ wider, a little more coarsely sculptured and less shining than in ♀, in both sexes with medial and two sublateral carinae separated by shallow setiferous sulci, sublateral carinae almost reach apex of rostrum, medial carina much shorter, especially in ♀, apical part with rather large



Figs. 1–13. *Nanophyes sanisharensis* n. sp. – 1. Dorsal view; – 2. prothorax and elytra, side view; – 3. antenna; – 4. male head, frontal view; – 5. female head, frontal view; – 6. male head, side view; – 7. female head, side view; – 8. front leg, dorsal view; – 9. apex of front tibia, ventral view; – 10. hind tibia, dorsal view; – 11. penis, side view; – 12. penis, dorsal view; – 13. tegmen. – Scale: 0.25 mm.

but very shallow and indistinct points, lateral surface with distinct additional sulcus above false scrobe. Antennae inserted before middle (♀) or in apical third (♂) of rostrum. Antennal scape reaching front margin of eye, thin, straight, abruptly clavate at apex. Funicle much shorter than scape, 5-jointed, its 1st joint longer than others, incrassate, twice longer than broad; 2nd much more slender, longer than broad; 3rd a little wider shorter than 2nd; 4th asymmetrical, thickened; 5th as wide as 4th, globose. Club loose, not darkened, nearly as long as scape; its apical joint about 1.3 times longer than the two preceding together and almost 3 times longer than broad. Head conical, behind eyes almost bare, smooth and shining. Frons in the narrowest place 3.0 (♂) or 2.6 (♀) times narrower than rostrum, not linear, in side view convex, with long thick slightly raised setae directed forward and arranged into two somewhat irregular rows along eye edge.

Pronotum twice broader than long, with straight sides, narrowed forward from base; its base 2.8 times as broad as apex, straight, not crenulate. Vestiture very thin and evenly distributed, setae long, fine, almost recumbent, directed forward; long specialized setae present though only relatively raised above ground vestiture.

Elytra only slightly longer than broad, convex, at basal margin as broad as prothorax, rectilinearly widened from base to humeral calli, then evenly and rather strongly narrowed to apex, with slightly arcuated sides. Elytral striae rather deep, shallow punctate, 10th stria interrupted medially. Intervals broader than striae, nearly flat, very finely and indistinctly punctulate, 8th interval not crenulate at base. Basal edge with dark crenulation, a little raised above the pronotum level. Vestiture very thin and evenly distributed except thicker and denser white hairs at base of 2nd and 4th intervals; ground setae long, fine, nearly recumbent, directed backwards, arranged into two or three irregular rows at each interval. Long specialized setae present at odd intervals but raised only slightly above ground vestiture except the erect subhumeral seta.

Side pieces of meso- and metathorax with rather dense and thick, long recumbent hairs, abdomen with thin pubescence. Pygidium simple in both sexes, without median fovea. 1st abdominal suture distinct, without lateral pits, 4th suture functional. Legs long and slender. Femora not incrassate, similar in both sexes, with a long fine spine beneath and very small indistinct additional grain distad of it. Tibiae slender, nearly straight, a little shorter than femora, with long specialized setae in distal part; front tibiae slightly but distinctly bisinuous. Tarsi long and slender, with 1st joint almost 3 times longer than broad; last tarsal joint long and slender, claws equal, connate.

Penis acuminate, arcuated apically in side view; tegmen slightly emarginate apically, with plate-base widely arcuate.

Body length 1.6 mm (rostrum excl.).

Among Oriental species with a single femoral spine the new species is similar in elytral pattern to *N. triangulifer* Voss 1957 from Java, which is a smaller species with shorter pubescence and more evenly arcuate rostrum longer than head and prothorax together.

Like the two preceding species *N. sanisharensis* n. sp. is a true *Nanophyes* similar in external features to Palaearctic *Nanophyes* s. str. but differing in armed femora and shape of the plate-base of tegmen.

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